ALARA Begins With The Employee

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- **Plutonium a very hazardous substance. We understand this and take very special care in handling this heavy metal. In applying ALARA concepts and using the ISMS principles, we the employees, can take control of our own environment, our work place, and can feel safe in what we do.**

History

- **The Plutonium Finishing Plant was built in 1949 with the mission of converting plutonium from an oxide to a metal and fabricating it into Pu Buttons and weapons components called cores for use in Atomic weapons.**
- **The weapons fabrications program concluded in 1989 after it was decided that no more plutonium (Pu) would be produced in this country.**
- **The Department of Energy signed a Record of Decision on the Environmental Impact Statement for the Plutonium Finishing Plant stating that our new mission is to stabilize the Pu and takes our facility to slab, meaning that it should look like we never existed.**

Stabilizing Plutonium

- **At this time we are using several different methods of stabilizing the different forms of Pu that are stored in our vaults. It has been shown in the past that whenever a process is started in the facility personnel dose rates dramatically increase. The average annual whole body dose was around three Rem. Now we are facing that problem again.**

Employee Involvement

- **The employees went to work to reduce the Dose Rates and control contamination.**

The ALARA Program Was Revamped in 2000

ALARA Committee

- Established with represented employees from different departments in the facility to:
  - Develop annual ALARA goals
  - Review exposure performance
  - Recommend exposure improvement
  - Receive and act on worker concerns and improvement suggestions

- Enhanced ALARA Committee (EAC)
  - A special forum of managers and workers, chaired by the PFP Director
  - Established to look at High-risk radiological work packages Look at Individual radiation exposure limit extensions

PFP ALARA Charter

PFP ALARA Charter Purpose:

- The PFP ALARA Committee is the eyes and ears of the workers for radiological safety, which includes reducing dose. This group:
  - Provides proactive recommendations in a timely fashion to PFP management
  - Encourages management ownership of and commitment to agreed upon actions
  - Develops and recommends facility ALARA goals to Senior Facility Management for approval
  - Reviews status of quarterly and annual ALARA goal reports
  - Reviews the facility's, organizational and individual exposure trends
  - Submits recommendations to Senior Facility Management
  - Evaluates worker ALARA concerns, suggestions, and improvements
  - Promotes radiological improvement and ALARA by communicating and recognizing good practices and achievements

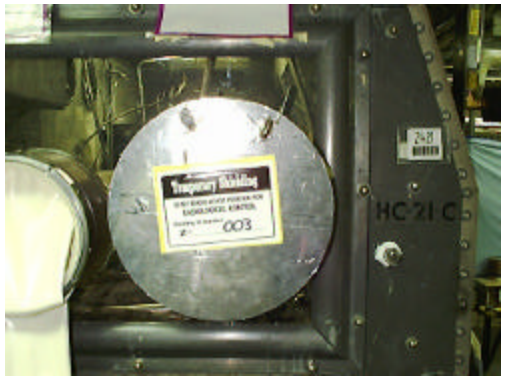
Team work

- **Work in a glove box was reorganized to reduce Dose Rates**
- **Radiological Control Technicians came up with an idea to reduce dose by designing a device to hold a can of Pu while the can is being dose rated.**

Team work

- **A Radiological Control Technician saw a problem with transporting samples to the lab and other places, so he designed a lead lined bag similar to a lunch bag.**

- **An Operator wanted to reduce dose emitting from Glove Boxes by installing lead shielding over the ports when not in use.**



- **Lead glass shielding added to glovebox to reduce dose rate.**

Team work

- When changing filter boxes on the outside of Glove Boxes, a Radiological Engineer designed a way to put blank flanges both around the filter box and in front of the opening in the Glove box, thus preventing contamination spread and eliminating the need for a containment device i.e. Glove Bag.

- Lead Vests have been around for quite some time but because of their weight and some problems with measuring actuate dose people are receiving, they were put on the shelve. Employees were asked for suggestions to make these Vest work and make them ergonomic. The ALARA chairman found a way to make their ideas work and also be able to get correct dose measurements.

Team work

- **Automated Job Hazard Analyses (AJHA) is a program on the computer designed to look at a planned job prior to starting it. It helps the employee to examine the work by answering questions pertaining to hazards which can occur during most types of work.**

Conclusion

- **We may not be able to totally solve all our radiological concerns, but by using the ISMS Principle, involving the worker, we hope to meet the challenges and do our best to resolve them.**